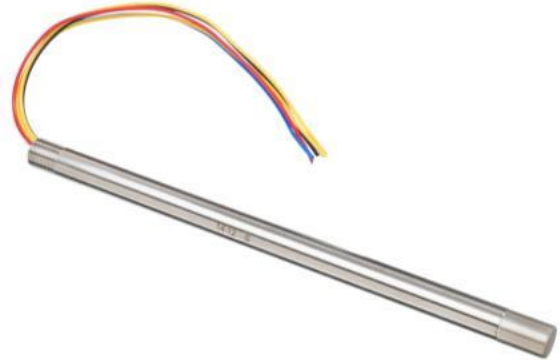


# Data Sheet

## Zirconia O<sub>2</sub> Sensors Probe Series- Long Housing

### Characteristic

- Zirconia (ZrO<sub>2</sub>) sensing element
- Long life, non-consumable technology
- Integrated heating element
- high-accuracy
- Need external interface board to run<sup>a</sup>



<p><b>response time</b></p> <p>&lt; 4 secs</p> <p>&lt; 15 secs</p>	<p><b>Heater Voltage</b></p> <p>4.35 V VOLTAGE</p> <p>4 V VOLTAGE</p>	<p><b>Gas temperature</b></p> <p>-100°C to +250°C TEMPERATURE</p> <p>-100°C to +400°C TEMPERATURE</p>	<p><b>terminal</b></p> <p>LEAD WIRES</p>
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### merit

- No reference gas is required
- No temperature stability required
- Available in three lengths; 220mm, 400mm and 600mm

### technical specifications

<b>Heater voltage<sup>b</sup></b>	
Work (standard response) await the opportune moment	4V <sub>DC</sub> ± 0.1V <sub>DC</sub> 1.65V <sub>DC</sub> (0.7A)(1.7A)
Work (quick response)	4.35V <sub>DC</sub> ± 0.1V <sub>DC</sub> (1.85A)
Pump impedance at standby 700°C under allowable gas temperature	2V <sub>DC</sub> (0.85A) < 6kΩ
Standard temperature high	-100°C ~ +250°C -100°C ~ +400°C
gas flow rate	0—10 m/s
Repetition allows acceleration accidental allows acceleration	5g 30g

### output value

Accuracy of oxygen pressure range	2mbar—3bar max
Internal operating temperature	5mbar max 700°C
Response time (10-90% step)	
Standard responsive sensor	< 15s
Fast response sensors	< 4s
Preheat time (before sensor operation)	60s 20
Preheat time (standby wake up) output stability time	s~ 180s

Additional sensor options may be provided upon request. Please email us at:

[technical@sstsensing.com](mailto:technical@sstsensing.com)

**Need help? Call + for expert advice  
44 (0) 1236 459 020 and Seek  
Technical assistance**



a) The interface board is sold separately; please contact [technical@sstsensing.com](mailto:technical@sstsensing.com) for details.  
b) Due to the voltage drop in the power cable, the heating voltage must be measured as close as possible to the sensor.  
c) If you use your own interface board, note that the constant current source used in the pump circuit should be designed to drive loads up to 6kΩ.

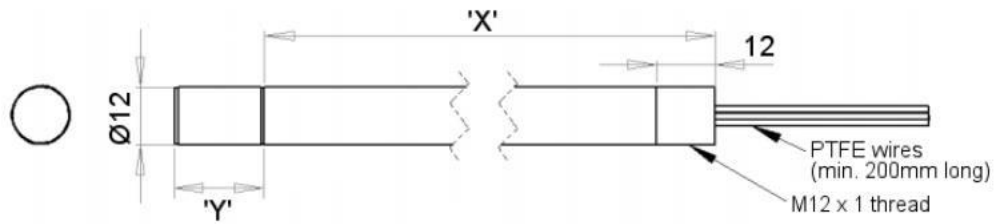
## outside drawing

All dimensions are in mm.

O2S-T6-SH  
Mass: 105g

O2S-T6  
Mass: 195g

O2S-T6-LG  
Mass: 295g



Here the 'X' is the probe length, see the [order information](#) for details.

**pay attention to :** High temperature probes have single core wires.

Here 'Y' is the lid length;  
standard response-17.8  
mm quick response-15  
mm

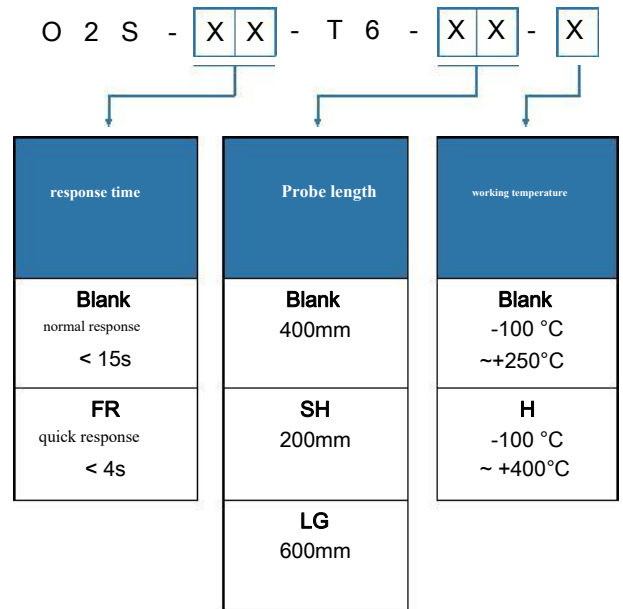
## Electrical interface

### lead wire

lead	definition
red	pump
black	Public
yellow	heater (1)
blue	sense
yellow	Heater (2)

## Order information

Use the following model definition rules to generate your specified model.  
Use only the letters and numbers that correspond to the sensors and output options you need-ignore the letters and numbers you don't need.



### CAUTION

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.  
Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.  
Zirconium dioxide sensors are damaged by the presence of silicone.  
Vapours (organic silicone compounds) from RTV rubbers and sealants are known to poison oxygen sensors and MUST be avoided.  
Do NOT use chemical cleaning agents.

**Failure to comply with these instructions may result in product damage.**

### INFORMATION

As customer applications are outside of SST Sensing Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application.  
For detailed information on the sensor operation refer to application note AN 0043 Operating Principle and Construction of Zirconium Dioxide Oxygen Sensors.

**For technical assistance or advice, please email:**  
[technical@sstsensing.com](mailto:technical@sstsensing.com)

**General Note:** SST Sensing Ltd. reserves the right to make changes to product specifications without notice or liability.  
All information is subject to SST Sensing Ltd.'s own data and considered accurate at time of going to print.



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